Amendments to the Claims:

1. (Currently Amended) An apparatus for a communication system in which space-time encoded data is transmitted at a first location and at least at a second location for communication to a receive station, said receive station for decoding the space-time encoded data received thereat, said apparatus comprising:

a decoder coupled to receive indications of received values of the space-time encoded data received at the receive station, said decoder for directly combining the received values of the space-time encoded data transmitted from different ones of the first and at least second locations to the receive station, the received values of the space-time encoded data, once directly combined, forming a real-valued vector, free of imaginary component parts, and said decoder further for detecting values of symbols of which the space-time encoded data is formed, said ~~detector~~ decoder being for detecting the values of symbols as a function of the real-valued vector into which the received values are directly combined, the function being devoid of any complex matrices.

2. (Previously Presented) The apparatus of claim 1 wherein the space-time encoded data transmitted at the first and at least second locations comprises a space-time encoded block of data, and wherein said decoder directly combines received values of the space-time encoded block.

3. (Previously Presented) The apparatus of claim 2 wherein said decoder further forms a sequence estimate, the sequence estimate formed of a sequence of values of the symbols.

4. (Original) The apparatus of claim 1 wherein the communication system comprises a radio communication system, wherein the first location at which the space-time encoded data is transmitted comprises a first antenna transducer, wherein the second location at which the space-time encoded data is transmitted comprises a second antenna transducer, the second antenna transducer spaced apart from the first antenna transducer, wherein the receive

station comprises a radio receiver, and wherein said decoder is coupled to receive indications of the space-time encoded data received at the radio receiver.

5. (Previously Presented) The apparatus of claim 4 wherein the space-time encoded data transmitted at the first antenna transducer is transmitted upon a first communication path to the receive station, wherein the space-time encoded data transmitted at the second antenna transducer is transmitted upon a second communication path to the receive station, wherein the receive station comprises at least one receive-antenna transducer coupled to transduce indications of the space-time encoded data transmitted upon the first and second communication paths, respectively, into electrical form, and wherein the indications of the received values of the space-time encoded data to which said decoder is coupled to receive are in electrical form, subsequent to reception at the receive-antenna transducer.

6-10. (Cancelled)

11. (Currently Amended) A method for communicating in a communication system in which space-time encoded data is transmitted at a first location and at least a second location for communication to a receive station, said method for decoding the space-time encoded data, once received at the receive station, said method comprising:

directly combining received values of the space-time encoded data transmitted from different ones of the first and at least second locations to the receive station, the received values of the space-time encoded data, once directly combined, forming a real-valued vector, free of imaginary component parts;

detecting values of symbols of which the space-time encoded data is formed, the values of symbols being detected as a function of the real-valued vector into which the received values are directly combined, the function being devoid of any complex matrices.

12. (Previously Presented) The method of claim 11 wherein the space-time encoded data transmitted at the first and at least second locations comprises a space-time encoded block

of data and wherein directly combining received values of the space-time encoded data comprises directly combining values of the space-time encoded block.

13. (Previously Presented) The method of claim 12 further comprising forming a sequence estimate, the sequence estimate formed of a sequence of values of the symbols detected during detection of the values of symbols of which the space-time encoded data is formed.

14. (Previously Presented) The method of claim 11 wherein the communication system comprises a radio communication system, wherein the first location at which the space-time encoded data is transmitted comprises a first antenna transducer, wherein the second location at which the space-time encoded data is transmitted comprises a second antenna transducer, the second antenna transducer spaced apart from the first antenna transducer, wherein the receive station comprises a radio receiver, said method further comprising receiving indications of the space-time encoded data at the radio receiver prior to directly combining the received values of the space-time encoded data.

15. (Previously Presented) The method of claim 14 wherein the space-time encoded data transmitted at the first antenna transducer is transmitted upon a first communication path to the receive station, wherein the space-time encoded data transmitted at the second antenna is transmitted upon a second communication path to the receive station, wherein the receive station comprises at least one receive antenna transducer and wherein receiving indications of the space-time encoded data comprises transducing said indications of the received values of the space-time encoded data transmitted upon the first and second communication paths, respectively, into electrical form.

16-20. (Cancelled)